Volume TWO Number 2
December 22,1979

PROGRAM LISTINGS this issue are done (for the most part) on my new printer. The originators sent a tape which made it easy to load into the machine and try out, and then a *PRINT;LIST and zing,zing goes the printer. Last month I took my Bally and a portable TV over to the COMPRINT plant in Mountain View, and talked to one of their engineers, Larry Kelly. We soldered up a couple of wires and got them working right off the bat. We tried a couple of LIST programs and I went off to order my own unit. Here are some of the details:

Page 20 of Vol.1 has the schematic of the cassette interface, but it leaves out a bit of pertinent data which was included in the Hacker's Manual. The modified picture is shown in Fig 1 below. The missing piece of the page 20 diagram is the dotted line from pin 15 of IC 7 over to pin 6 of IC 5. There is no connection at the output pin 7 of IC 5 as constructed. This is the printer connection point.

Fig.2 is a part of the pc board shown in the Hacker's Manual, and shows exactly where the tap should be made to get the data line (pin 7) and the ground line (pin 8). The other end of the wires I soldered here went to the COMPRINT connector, to pins 3 and 7 respectively. The connector they use is an RS 232 type with 25 pins (looks like the hand controller connector, only bigger). I did have an intermediate connector using a miniature jack per the Manual suggestion.

To get the proper output from the Bally, the command *PRINT must be used instead of :PRINT as when going to tape.

Fig. 1 :-

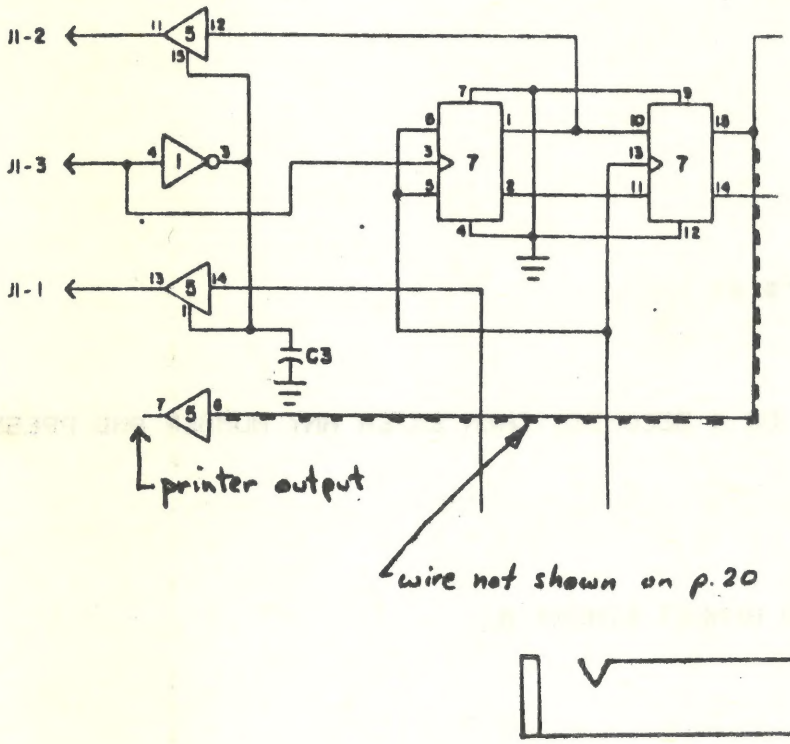
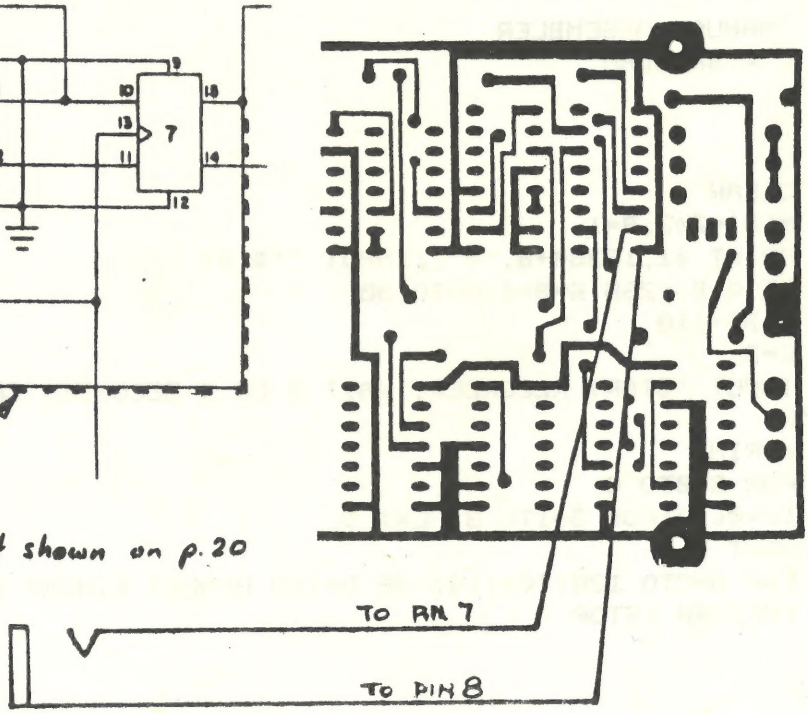


Fig. 2 :-



CHECKERS II is an upgraded version of the previous game by John Collins and I think we have it bug-free this time. It includes some enhancements suggested by subscribers in comments to version I, and it operates somewhat faster than before. Bill Templeton checked it out for me, and suggested the following color addition- FC=107;&(9)=17;&(0)=7;&(1)=7;&(2)=8;&(3)=8

BIORYTHM has the following preface: After inputting the requested dates, the machine will do a few internal operations and finally three numbers will appear on the screen. The older you are, the longer it takes. These numbers are factors for the desired year. You will be asked for a specific month and day - input as before. After a brief time a graph will be displayed. The vertical line corresponds to the day requested, to index the three cycles. After a long count, the computer will tell you how many days you have lived.

ATTACK This is a game of CHASE. The object is to maneuver yourself into a position where all five attackers destroy themselves by smashing into walls in the process of chasing you.
Number of walls must be entered at the start of the game.
Joystick #1 and Trigger #1 are the only controls used. The joystick changes your position to the corresponding direction. The trigger is used to start the game and also to hold your current position.

MANUAL ASSEMBLER is an interesting program which I do not understand. It pokes in characters and then prints them out. Start pumping in the following sequence of numbers when the program starts asking "16385= " - 255 53 ∅ 24 76 8 64 these will call subroutine 52 and load up the initial conditions, then when 16392 shows up, the program is asking for the characters to be printed. If you insert the following, you will see our old familiar ARCADIAN - 65 82 67 65 68 73 65 78 ∅ ∅ ∅. This is something for the more advanced subscriber to play with...

```
  1 .MANUAL ASSEMBLER
  2 . R.BRADDAM
  3 .
  4 .
  5 .
 10 CLEAR
 20 @(0)=243;B=1
 30 PRINT #1,16384+B,"=",;INPUT ""@(B)
 40 IF @(B)<256 B=B+1;GOTO 30
 50 @(B)=118
 60 C=B
 70 INPUT "START RECORDER, WAIT 3 OR 4 SECONDS, THEN ENTER ANY NUMBER AND PRESS
GO."W
 80 :PRINT
 90 FOR B=0TO C
100 TV=@(B);FOR D=1TO 8;NEXT D
110 NEXT B
120 FOR B=CTO 128;TV=118;FOR D=1TO 8;NEXT D;NEXT B
130 :RETURN ;STOP
```

MY MEMORY ADDITION board is going into the design phase, with delivery scheduled for early next year, but knowing how things go, probably middle of next year. To keep my cost down, I won't get all the memory slots filled in. It'll accept my Jameco 610 keyboard, and other peripherals. Subscribers who have indicated interest in this board will find an added sheet with some details. You will receive this sheet if your address label has an AO printed on it or a blue dot.

S-100 BUS INTERFACE CARD A project is being considered that would allow us to tie the Bally to all the S-100-compatible peripherals. This card would have the Bally Bus on one edge and an S-100 Bus on another edge. The card would fit into an S-100 motherboard, and would have dual input capability, so that the Bally could be either master or slave. At the moment we are developing specifications.

EPROM BURNER is another scheme being worked on. It is currently being planned to be located on the S-100 board. With this device, we will have the capability to take a program and install it into a ROM, and then the ROM can be plugged into the front cartridge slot after mounting it on a suitable pc board.

WHAT DO YOU WANT? I would like to make a serious survey of the subscribers to find out what is needed/wanted and the demand for those things to see if any efforts would be warranted. I would like to receive a list of 'things' plus an indication from you if you are able to help in writing the specifications for those 'things' we come up with. 'Things' might be ... computer/computer interaction via telephone lines...or...radio code transmitting and receiving ... or...a self diagnostic cartridge...or... a method to generate and store characters...or...???

RF CABLE PATCH BOX is offerred by Video Cassette Rentals of 1841 E. Chapman, Orange CA 92667. This box is used to connect RF cables, such as antennas or TV recorders or games together. Those of you with multiple units might find these handy to cut the tangle of cables. They offer subscribers a 10% discount.

BALLY will be in Las Vegas during the Winter CES in January. They will have a suite at the Hilton and expect to show proposed game cartridges to their distributors/dealers. To be shown are Checkers, Dogpatch, Biorythms (with Perpetual Calendar), and Chess. Industry-wide shortage of memory chips has been holding up deliveries of current games and will have some effect on the new ones. The scheduled decision on the production of the Add-On remains at late January.

RESEQUENCING ERROR has been pointed out... in part of line 20060, it should read
FOR A=-24574 TO A+1796-SZ

MANUAL HOLDERS might be interested to note that pages 135 thru 143 ("Electrical Specifications for Midway Custom Chips") originated at American Microsystems, Inc., makers of the custom chips.

```
  4 .
  6 :RETURN
  7 PRINT "(C)CHECKERS_JOHN COLLINS";GOTO 3000
  8 R=U;Q=-1;X=11;U=89;T=-1;V=8;A=12
  9 NEXT Q;NEXT X
 10 NEXT U;NEXT V;IF T<0GOTO 1200
 20 GOSUB 2000;PRINT "KEY RUN ";STOP
 50 CX=-71;FOR U=ATO 89;IF @(U)<4GOTO 55;A=U;U=89
 55 NEXT U;FOR V=1TO 8;PRINT #1,V,;FOR U=ATO 89;IF @(U)<4GOTO 10
 60 FOR X=9TO 11STEP 2;FOR Q=1TO -1STEP -2;IF @(U)=4Q=-1
 70 B=QbX;S=U+B;IF @(S)=0GOTO 9
 75 IF V>2IF @(S)#3GOTO 9
 80 C=B+B;F=Qb20;Z=Vb100;GOTO Z
100 IF @(U+C)#3GOTO 9
200 IF @(S)>2GOTO 9
220 IF V=1 S=U+C;GOTO 8
230 S=U-B;IF @(S)#3GOTO 9
235 IF @(U-C+F)=2GOTO 260
240 IF @(U-F)>3 U=U-F;GOTO 8
250 IF @(U-C)>3 U=U-C;GOTO 8
260 S=U-B+F;IF @(S)=3GOTO 8
290 GOTO 9
300 IF @(S-F)#1GOTO 9
310 IF @(S)=3GOTO 8
320 S=S-2b(X-10);IF @(S)=3GOTO 8
330 GOTO 9
400 IF @(U+C)=0IF @(U)=4GOTO 8
410 GOTO 9
500 L=1
600 L=1;IF @(U+C)<3GOTO 9
610 IF @(U+F)<3IF @(U+C-F)=3GOTO 9
620 IF @(U+F)=3IF @(U+C-F)=1GOTO 9
625 IF V=5GOTO 700
630 L=L+1;D=@(U+LbB);IF (D=0)+(D>3)GOTO 9
650 IF L#2IF D<3GOTO 8
660 GOTO 630
700 IF @(U)=5GOTO 9
800 GOTO 8
1000 CX=-71;CY=40;PRINT "FROM";GOSUB 1700;R=I;PRINT " TO";GOSUB 1700;S=I
1010 IF (@(R)>2)+(@(R)=0)+(@(S)#3)GOTO 1000
1040 IF @(R)#1IF R>SGOTO 1000
1200 IF ((S-R)b(S-R))<122GOTO 1600
1210 IF T>0IF @((S+R)c2)<4GOTO 1000
1220 J=T;@(S)=@(R);@((S+R)c2)=3;@(R)=3
1400 FOR X=9TO 11STEP 2;G=S+JbX;IF (@(G)=3+T)+(@(G)=3+T+T)GOTO 14
1430 GOTO 1500
1450 G=S+2bJbX;IF @(G)#3GOTO 1500
1470 R=S;S=G;X=11;NEXT X;GOTO 1220
1500 NEXT X;IF (ABS(@(S)-3))=2IF J=T J=-T;GOTO 1400
1510 GOSUB 2000;GOTO 1610
1600 @(S)=@(R);@(R)=3;I=R;GOSUB 2020;I=S;GOSUB 2020
1610 IF T>0IF S>80@(S)=1
1620 IF T<0IF S<20@(S)=5
1630 IF T>0GOTO 50
1640 T=1;GOTO 1000
1700 INPUT " ROW"M;INPUT " COL"N;I=Mb10+N+1;RETURN
2000 CLEAR ;FOR I=1TO 8;CY=40;CX=-6+Ib10;PRINT #1,I,;NEXT I;FOR I=1TO 8;CX=-5
2010 CY=-49+Ib10;PRINT #1,I,;NEXT I;FOR I=12TO 89;IF @(I)#0GOSUB 2020
2015 NEXT I;RETURN
2020 M=-17+(I-(Ic10)b10)b10
2030 N=-49+(Ic10)b10
2040 BOX M,N,10,10,1;IF @(I)#3 J=ABS(@(I)-3)b3;BOX M,N,8,J,3
2050 IF @(I)>3BOX M,N,6,J-2,3
2100 RETURN
3000 FOR I=1TO 100;@(I)=0;NEXT I;FOR I=12TO 18STEP 2
3010 @(I)=2;@(I+11)=2;@(I+20)=2;@(I+31)=3;@(I+40)=3
3020 @(I+51)=4;@(I+60)=4;@(I+71)=4;NEXT I;A=67
3030 GOSUB 2000;GOTO 50
```

b means × (multiply)
c means ÷ (divide)

```
  2 .ATTACK
  3 .BY CARL MORIMOTO
  4 .
 10 :RETURN
100 CLEAR ;NT=0;BC=250;FC=7
110 P=20;Q=10;CX=P-21;CY=Q
120 Z=950
130 GOSUB 1250
140 NT=4;PRINT " ATTACK";NT=0
150 CX=-60;CY=-32;INPUT "# WALLS (1-20)"U
160 U=U+6;IF U>26U=26
165 GOTO 200
170 A=RND (100)
180 IF TR(1)=0GOTO 170
200 @(1)=RND (100)
205 FOR A=2TO U
210 L=RND (100)
215 N=A-1
220 FOR B=1TO N;NT=2;MU=L+B;NT=0
230 IF L=@(B)GOTO 210
240 NEXT B
250 @(A)=L;NEXT A
255 P=RND (60)-30;Q=-10
260 CLEAR ;BC=7;FC=250;GOSUB 1250;P=P-28;Q=Q-23
270 FOR A=7TO U
280 GOSUB 1105;GOSUB 1120
290 NEXT A
300 FOR A=2TO 6
310 GOSUB 1105;GOSUB 1135
320 NEXT A
350 X=@(1);Y=(X-1)c10;X=X-Yb10
360 GOSUB 1150
400 CX=-60;CY=36;PRINT "YOUR MOVE"
410 IF TR(1)#0GOTO 515
420 K=JX(1);J=JY(1)
430 IF K=0IF J=0GOTO 410
500 GOSUB 1100;BOX H,I,5,5,1
510 X=X+K;Y=Y+J
515 GOSUB 1150
520 IF X<1GOTO Z
530 IF X>10GOTO Z
540 IF Y<0GOTO Z
550 IF Y>9GOTO Z
560 C=Yb10+X
570 FOR A=2TO U
580 IF C=@(A)GOTO Z
590 NEXT A
600 FOR A=2TO 6
610 L=@(A);IF L<1GOTO 770
620 T=(L-1)c10;S=L-Tb10;V=X-S;W=Y-T
622 FOR B=2TO 6
624 IF A=BGOTO 628
626 IF L=@(B)GOTO 650
628 NEXT B
630 GOSUB 1110;BOX H,I,5,5,1
650 IF V=0GOTO 680
660 IF V<0S=S-1
670 IF V>0S=S+1
680 IF W=0GOTO 710
690 IF W<0T=T-1
700 IF W>0T=T+1
710 GOSUB 1130
720 D=Tb10+S;@(A)=D;IF D=CGOTO 980
730 FOR B=7TO U
740 IF D#@(B)GOTO 760
750 @(A)=-1;GOSUB 1190;GOTO 770
760 NEXT B
770 NEXT A
780 FOR A=2TO 5;L=@(A);IF L<1GOTO 820
790 FOR B=A+1TO 6;IF L=@(B)@(A)=-1
810 NEXT B
820 NEXT A
830 FOR A=2TO 6
840 IF @(A)>0GOTO 400
850 NEXT A
900 FOR A=1TO 7;GOSUB 1150;NEXT A
910 FC=7;BC=250
920 PRINT "ALL ATTACKERS DESTROYED"
930 GOTO 170
950 FC=118;BC=1
960 PRINT "YOU ZAPPED YOURSELF"
970 GOTO 1000
980 FC=82
990 PRINT "YOU ARE ZAPPED"
1000 NT=2;FOR A=1TO 15;X=FC;FC=BC;BC=X
```

b means x (multiply)

c means ÷ (divide)

LINES 1010-1250 CONTINUED ON P. SIXTEEN

```
  3 .HANGMAN
  5 .BY CARL MORIMOTO
  6 .
 10 :RETURN
100 NT=0;CLEAR ;&(10)=174;FC=0
110 Z=-62;M=-15;L=-19
120 S=32;J=500
130 T=0;E=0;U=0
200 CX=28;CY=L;PRINT "HANGMAN"
210 CX=-77;CY=5;NT=2;PRINT "ENTER";PRINT "WORD";PRINT "FROM";PRINT "KEYPAD";CX=
-71;CY=-31;PRINT "→
220 CX=-62;CY=-3▮;A=1
230 IF A=0 A=1
240 IF A>22GOTO 310
250 B=KP;MU=B;IF B=13GOTO 310
260 IF B#31GOTO 280
270 IF A>1TV=B;TV=S;TV=B
275 A=A-1;GOTO 230
280 IF B>64IF B<91TV=45;GOTO 300
290 B=S;TV=S
300 @(A)=B;A=A+1;GOTO 230
310 C=A-1;NT=0
320 BOX -63,-7,35,35,2;BOX -72,-31,5,5,2
330 BC=85+Cb8
340 BOX 0,-25,131,1,1
350 BOX -39,5,2,60,1
360 BOX -26,34,24,1,1
370 BOX M,L,21,11,1;BOX M,L,19,10,2
380 &(10)=160;CX=-62;CY=-40
390 NT=10;FOR A=1TO C;TV=@(A);NEXT A
400 NT=0
500 N=KN(1)cB+77
510 IF N<65N=65
520 IF N>90N=90
530 IF N#T CX=Z;CY=40;TV=N;T=N;TV=95
540 IF TR(1)=0GOTO J
545 CX=CX-6;NT=10;TV=42;NT=0
550 IF E=0GOTO 590
560 FOR A=1TO E
570 IF N=@(A+22)GOTO J
580 NEXT A
590 @(E+23)=N;E=E+1
600 R=0;D=0
610 FOR A=1TO C
620 IF @(A)=S R=R+1
630 IF @(A)#NGOTO 670
640 CX=Z;CY=40;TV=S;TV=S
650 CY=-31;CX=-62+(A-1)b6
660 NT=20;TV=N;NT=0;@(A)=S;D=1;R=R+1
670 NEXT A
680 IF D=0GOTO 800
690 IF R<CGOTO J
700 CX=28;CY=20;PRINT "SAVED"
710 NT=5;FOR A=1TO 10;BC=252;MU=52;NEXT A;NT=0
750 IF TR(1)=0GOTO 750
760 GOTO 100
800 Z=Z+6;NT=20;MU=24;NT=50;MU=10;NT=0
810 U=U+1;GOTO Ub50+950
1000 G=L;H=-21;GOTO 1060
1050 G=-11;H=-9
1060 BOX G,2,5,4,1;BOX G,-5,3,19,1;BOX H,-12,3,2,1;GOTO J
1100 BOX M,6,9,11,1;BOX M,14,3,4,1;GOTO J
1150 BOX M,23,9,3,1;BOX M,21,15,2,1;BOX M,17,11,6,1;BOX M,17,15,3,1
1160 BOX M,18,7,3,2;BOX M,18,1,3,1;BOX M,15,5,5,1;GOTO J
1200 G=-7;GOTO 1260
1250 G=-22
1260 BOX G,9,6,3,1;GOTO J
1300 G=-5;H=-7;GOTO 1360
1350 G=-24;H=-23
1360 BOX G,5,4,5,1;BOX G,1,2,4,1;BOX H,0,1,3,1;GOTO J
1400 BOX M,30,1,10,1
1410 NT=30;BOX M,19,5,2,1;BOX -16,17,2,1,2;BOX -13,17,2,1,2;NT=0;GOTO J
1450 BOX M,L,21,11,2;BC=67
1600 A=48;B=49;C=50;E=45;F=43
1610 &(10)=174;NT=10
1620 MU=B;MU=A;MU=A;MU=B;MU=A;MU=B;MU=B;MU=A;MU=A;MU=F;MU=C;MU=A;MU=C;MU=C;MU=A;
     MU=B;MU=B;MU=A
1630 MU=E;MU=B;MU=B;MU=A;MU=A;MU=A;NT=0;GOTO 750
```

b means x (multiply)
c means ÷ (divide)

FOURTH Z

arcadian

```
  1 .BIORYTHMS - - M.R. ANGLISS  1979
  2 :RETURN
  3 :RETURN
  4 :RETURN
  5 :RETURN
  8 CLEAR ;PRINT ;PRINT ;PRINT
 10 FC=7;NT=0
 11 PRINT "   -"
 12 PRINT "  O R"
 13 PRINT " I   H"
 14 PRINT "B     Y   S"
 15 PRINT "        T M"
 16 PRINT "         H"
 20 PRINT ;FC=1
 25 NT=3
 30 NT=3
 40 INPUT "MONTH"M
 45 CLEAR
 50 INPUT "DAY"D
 55 CLEAR
 60 INPUT "YEAR 19??"Y
 65 CLEAR
 70 PRINT "BIO-RHYTHM FOR THE"
 80 INPUT "YEAR 19??"C
 81 CLEAR
 82 PRINT ;PRINT ;PRINT
 85 PRINT "STAND BY FOR YOUR FACTORS TO BE COMPUTED"
 90 A=(C-Y)-1
 95 GOTO 380
100 A=Ab365
101 GOSUB Mb10+20
102 A=A+K
103 A=A+L
110 X=A+3;Y=A+3;Z=A+3
120 IF X<23GOTO 150
130 X=X-23
140 GOTO 120
150 PRINT "PHYSICAL",X
160 IF Y<28GOTO 190
170 Y=Y-28
180 GOTO 160
190 PRINT "EMOTIONAL",Y
200 IF Z<33GOTO 230
210 Z=Z-33
220 GOTO 200
230 PRINT "MENTAL",Z
240 GOTO 400
260 K=365-D;RETURN
270 K=334-D;RETURN
280 K=304-D;RETURN
290 K=273-D;RETURN
300 K=243-D;RETURN
310 K=212-D;RETURN
320 K=181-D;RETURN
330 K=151-D;RETURN
340 K=120-D;RETURN
350 K=90-D;RETURN
360 K=59-D;RETURN
370 K=31-D;RETURN
380 L=Ac4
390 GOTO 100
400 PRINT ;PRINT
410 PRINT "FOR WHAT DATE DO YOU WISH A BIO-RHYTHM?"
420 PRINT
450 INPUT "MONTH"M
460 INPUT "DAY"D
470 GOSUB Mb10+490
480 GOTO 620
500 W=0;RETURN
510 W=31;RETURN
520 W=59;RETURN
530 W=90;RETURN
540 W=120;RETURN
550 W=151;RETURN
560 W=181;RETURN
570 W=212;RETURN
580 W=243;RETURN
590 W=273;RETURN
600 W=304;RETURN
610 W=334;RETURN
620 U=W+D
```

b means × (multiply)

c means ÷ (divide)

```
630 R=U+X;S=U+Z;E=U+Y
640 IF R<23GOTO 670
650 R=R-23
660 GOTO 640
670 IF S<28GOTO 700
680 S=S-28
690 GOTO 670
700 IF E<33GOTO 730
710 E=E-33
720 GOTO 700
730 CLEAR ;PRINT
735 FC=65;NT=0
740 PRINT "EMOT"
750 PRINT ;PRINT ;PRINT
760 PRINT "PHYS"
770 PRINT ;PRINT
780 PRINT "MENT"
790 BOX 0,0,1,86,3
800 J=27;G=0-S;F=28-S;Q=28
810 H=Qc4;I=0;P=0
815 BOX 15,J,125,1,3
820 FOR T=GTO FSTEP 1
830 IF I<HGOTO 850
840 IF I<((Hb3)GOTO 950
850 P=P+1
860 BOX Tb2,Pb2+J,1,1,3
870 I=I+1
880 NEXT T
890 IF J=0GOTO 930
900 IF J=-26GOTO 970
910 J=0;G=0-R;F=21-R;Q=21
920 GOTO 810
930 J=-26;G=0-E;F=33-E;Q=33
940 GOTO 810
950 P=P-1
960 GOTO 860
970 FOR T=1TO 9999STEP 1
980 NEXT T
985 FC=0
990 PRINT "TODAY YOU ARE",A+U
1000 PRINT "DAYS OLD"
1010 PRINT "DO YOU WISH ANOTHER BIO-  RHYTHM FOR THE YEAR OF",C
1020 INPUT "1=YES 0=NO"T
1030 IF T=1GOTO 400
1040 CLEAR ;PRINT ;PRINT
1050 PRINT "DOES SOMEONE ELSE WANT A  BIO-RHYTHM, OR A DIFFERENTYEAR?"
1060 INPUT "1=YES 2=PROGRAM FINISHED"T
1070 IF T=1GOTO 10
```

b means x (multiply)

c means ÷ (divide)

CONTINUATION OF "ATTACK"
FROM P. THIRTEEN

```
1010 MU=44;MU=44
1020 NEXT A;NT=0;GOTO 170
1100 H=P+Xb5;I=Q+Yb5;RETURN
1105 S=@(A);T=(S-1)c10;S=S-Tb10
1110 H=P+Sb5;I=Q+Tb5;RETURN
1120 BOX H,I,5,5,2;NT=2;MU=H;MU=I;NT=0;RETURN
1130 GOSUB 1110
1135 BOX H,I,5,1,2;BOX H,I,1,5,2;BOX H,I,3,3,2
1140 NT=2;MU=53;MU=49;NT=0;RETURN
1150 GOSUB 1100;CX=-60;CY=36;PRINT "          "
1160 BOX H,I,3,3,2;BOX H,I,1,1,1
1170 NT=2;FOR E=1TO 5;MU=80;NEXT E
1180 NT=0;RETURN
1190 BOX H,I,5,5,1;BOX H,I,3,3,3;BOX H,I,5,5,2;BOX H,I,3,3,3
1200 BOX H,I,1,1,3;BOX H,I,3,3,2;BOX H,I,1,1,3
1210 NT=2;FOR E=1TO 6;MU=42;NEXT E
1220 NT=0;BOX H,I,5,5,2;RETURN
1250 BOX P,Q,62,62,3;BOX P,Q,60,60,3;BOX P,Q,50,50,3;RETURN
```

NUMBER MATCH

```
 4.NUMBER MATCH
 5.BY SCOTT WALPOLE
 10 CLEAR;C=0;NT=0;BC=249;FC=7
 20 BOX 0,0,40,40,1
 30 BOX 0,0,30,30,2
 40 FOR A=1 TO 50
 50 B=RND (9)
 60 CX=0;CY=0;PRINT #1,B
 70 FOR D=5 TO -5 STEP -1
 80 G=0
 90 IF &(23)=8 G=1;GOTO 200
100 IF &(22)=8 G=2;GOTO 200
110 IF &(21)=8 G=3;GOTO 200
120 IF &(23)=4 G=4;GOTO 200
130 IF &(22)=4 G=5;GOTO 200
140 IF &(21)=4 G=6;GOTO 200
150 IF &(23)=2 G=7;GOTO 200
160 IF &(22)=2 G=8;GOTO 200
170 IF &(21)=2 G=9;GOTO 200
180 IF D=-5 GOTO 220
190 NEXT D
200 IF G#B GOTO 80
220 C=C+D
250 CX=-30;CY=-32;PRINT "SCORE ➧",#2,C
260 IF A=50 GOTO 300
270 NEXT A
300 CLEAR;PRINT "YOUR FINAL SCORE ➧",#2,C
```

INSTRUCTIONS

The object of this game is to match the numbers one at a time as quickly as possible for the highest score. You have approx. 2 seconds to repeat the number displayed within the box using the keypad. If you press the wrong number, try for the same number again before your 2 seconds are up. If you still haven't got the right number and the 2 seconds have run out, 5 points will be deducted from your score and the computer will select a new number. Continue repeating the number until the program stops.

SHORT PROGRAMS

```
 4.RANDOM BOX
 5.BY SCOTT WALPOLE
10 CLEAR
20 FC=7;BC=0
30 BC=BC+8
40 IF &(21)=16 RUN   (Press the ERASE key to
50 X=RND (15)x10              clear the screen)
60 Y=RND (8)x10
70 BOX 0,0,X,Y,3
80 GOTO 30
```

MUSIC PROGRAMS

```
 4."HELLO,DOLLY!"
 5.BY SCOTT WALPOLE
10 CLEAR ;NT=13 (or 12)
20 PRINT "3500031356000031",
30 PRINT "357x17x17x1x2x150000",
40 PRINT "-45-560004246-7000",
50 PRINT "4246x3x2x3x2x3x275 (1 space)",
60 PRINT "607534-450003135600031",
70 PRINT "35x2x1x2x1x2x1x2x16000",
80 PRINT "70(3 spaces)x1065035x1x1x165035",
90 PRINT "x3x3x3x3x3x2x4x3x100"
100 IF &(23)=1 RUN   (Press GO to play again)
110 GOTO 100
```

LYRICS

```
3  50003  1  3    5  60003  1  3    5  7
Hello  Dolly well Hello  Dolly It's so nice

x1 7    x1  7    x1    x2  x150000-4     5
to have you back where you belong You're look-

-5  6000  4  2  4  6   -70004  2  4      6
ing swell Dolly we can tell Dolly You're still

x3  x2  x3     x2    x3  x2  7      5     60
glowin' you're still crowin' you're still go-

7   5      3  4    -4  5000 3    1   3   5
in' strong We feel the room swayin' for the

6000   3   1   3   5  x2   x1  x2  x1   x2
band's playin' one of your old fav'rite songs

x1   x2  x1   6000 70 x10  6   50   3  5
from way back when so take her wrap fellas

x1   x1  x1   6  50  3  5   x3    x3   x3x3
Find her an emty lap fellas Dolly I'll never

x3 x2x4x3x100
go away again!
```

```
 4."POPEYE THE SAILOR"
 5.BY SCOTT WALPOLE
10 CLEAR ;NT=12
20 PRINT "355540350550",
30 PRINT "564680650550",
40 PRINT "5646876[illegible]6531",
50 PRINT "3555607808[illegible]",
60 IF &(23)=1 RUN    (Press GO to play again)
70 GOTO 60
```

LYRICS

```
3   5  5   5   40  3  50     5     50
I'm Popeye the sailor man  (toot toot)

5 6    4  6 80 6    50    5    50
I live in a garbage can  (toot toot)

5 6    4  6  8   7    6    5   6  5   3 1
I like to go swimmin' with bow-legged wimin
                                    (women)
3   5  5   5   60  7  80    8    8
I'm Popeye the sailor man! (toot toot)
```

ADS:

SELL Bally computer system complete, includes PANZER ATTACK/RED BARON, CLOWNS, BREAKOUT, FOOTBALL, STAR BATTLE, BLACKJACK, BASEBALL and 4 joysticks. Best offer about $300. brand new. Mark Turnell, 4691 S. Elm Dr. Bay City Mich. 48706 (517) 684-9189

SELL Bally Arcade with 4 pistol grips, BASIC cart. Cassette Interface, SEAWOLF, FOOTBALL, BASEBALL, BLACKJACK, RED BARON, CLOWNS, LETTER MATCH, MATH, and 280 ZZAP. All for $320. Russ Craven 114 W. Wrenwood FresnoCA 93704 (214) 431-3689

SELL "INVASION" on C-10 cassette with documentation $5. George Collins 30 Sierra Ave., Piedmont CA 94611

SELL Bally Arcade complete with 4 controllers, BASIC, tape interface, and 4 game cartridges like new condition $350. V. James, 1284 Paddington Way San Jose, CA, 95127 (408) 251-7714

SELL Bally FOOTBALL cartridge $10. Your check will be promptly returned if cartridge sold. Check or money order to Cliff Donley 9916 Aldridge Dr. Columbia Station OH 44028

Best Wishes to all at this Holiday Season, and looking forward to an enjoyable New Year as we solve more mysteries of the Bally...

Robert Fabris, reveler
3626 Morrie Dr.
San Jose, CA 95127

FIRST
CLASS